UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/650,182	08/28/2003	Jeffrey J. Terlizzi	1400-35 (1568)	6462

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EXAMINER
LEE, DIANE I

ART UNIT	PAPER NUMBER
2876	

DATE MAILED: 05/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	10/650,182	TERLIZZI, JEFFREY J.
	Examiner	Art Unit	
	D. I. Lee	2876	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *4/11/05 (Preliminary Amendment)*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-25* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *28 August 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *8/28/05*.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   Receipt is acknowledged of the Preliminary Amendment filed 11 April 24, 2005. Claims

1, 3, 7-10, 13, 15-18, 20-21, and 24 have been amended; no claims have been canceled; and

no claims have been newly added by this Amendment. Currently, claims 1-25 are pending in

the application.

Specification

2.   The abstract of the disclosure is objected to because of the following(s):

        (a)   Line 8: "comprises" should be changed to --includes--.

Correction is required. See MPEP § 608.01(b).

Claim Objections

3.   Claim 1 is objected to because of the following informalities:

        (a)   Re claim 1, line 6: "interface circuitry" should be changed to --an interface

circuitry--. Appropriate correction is required.

Claim Rejections - 35 USC § 102

4.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects

> for purposes of this subsection of an application filed in the United States only if the international application
> designated the United States and was published under Article 21(2) of such treaty in the English language.

5.   **Claims 1-2, 6-9, 13-16, 20-21, and 24-25 are rejected under 35 U.S.C. 102(b) as**

being anticipated by Behrens et al. [US 5,258,604-referred as Behrens, cited by the

applicant].

        Re claims 1, 6-7, 13, 20, and 25: Behrens discloses a system for interfacing a bar code

scanner (i.e., a data acquisition device) to at least one host device of a plurality of host devices

having different interfaces, the data acquisition device comprising:

        a scan engine 2 for optically acquiring encoded data (see figure 8);

        at least one host device (see col. 1, lines 28+);

        a decoder 66 for receiving input data from the scan engine and decoding the received

input data according to a predetermined symbol (see col. 2, lines 25+); and

        an interface controller for interfacing the data acquisition device to at least one host

device (see figure 1), said interface controller comprising:

        a microcomputer 4 for receiving data acquired by the data acquisition device

(scan engine) and outputting a host device type signal (see the abstract and figure 1 for

example);

        an interface circuitry (see figure 1) in operative communication with the

microcomputer for receiving the host device type signal (receiving an identification code that

identifies the format of the interface required by the attached host or I/O device, wherein the

interface board identification and control circuit 6 applies the identification code as a token that

determine the type of format or protocols of the attached host or I/O device, see col. 1, lines

35+; col. 2, lines 62+; and col. 3, lines 2+) and the acquired data, selecting the at least one

interface from the plurality of interfaces in accordance with the host device type signal (the

address of a routine that is specific to the host or I/O board functions is stored in a memory,

such as a program storage 14, and the token is used to select the specific address of the

interface configuration routine from a plurality of interface configurations stored within the non-

volatile data storage 10, see col. 3, lines 10+) and transmitting the acquired data to the at least

one host device in accordance with at least one format corresponding to at least one selected

interface (i.e., the translated format or protocols recognizable by the identified by the token and

associating I/O device, see col. 2, lines 62+).

Re claims 2, 8-9, 15-16, and 21: program storage 14 (which stores the plurality of

interface configurations), in conjunction with the configuration storage 8 (which contains such

information as the required baud rate for serial transfer of information to the I/O device, parity bit

information and data format requirements) and a non-volatile data storage circuit 10 (which

contains additional codes required by the I/O device for processing bar code data) constitutes

the claimed memory for storing a plurality of data translation modules for translating the

received data according to the token applied by the interface board identification and control

circuit 6. Behrens also teaches a memory located in the controller (i.e., the applied token to the

microcontroller 4 by the interface board identification and control circuit 6 is stored in a memory

located in the controller 4).

Re claim 14: wherein the data acquisition device and the interface controller are an

integral device (see col. 1, lines 56+; col. 2, lines 25+; and figures 1, 6-8).

Re claim 24: The step of determining a type of the at least one host device is shown

from the scanner's operational sequence for configuring the system for operation with a

particular I/O device (see in Figure 9). The specific step of reading identification code by the I/O

port 6 serves the claimed step of performing an autodiscriminate routine to detect if the at least

one host is connected (i.e., when the system is energized, the system detects at least one host

is connected by detecting the identity of the I/O device, see col. 6, lines 41+ and figure 9).

6.   **Claims 3-5 are rejected under 35 U.S.C. 102(e) as being anticipated by Kelly et al.**
[US 6,705,527-referred as Kelly].

Kelly discloses a data acquisition device (a data reading device 10, such as a bar code scanner) for acquiring bar code data (see figure 1);

at least one host device (30a-30n) for receiving and processing the acquired data; and

an interface controller for interfacing the data acquisition device to the at least one host device (see figure 2); said interface controller comprising:

a microcomputer 60 for receiving data from the data acquisition device, including the acquired data, and outputting a host device type signal (see figure 2); and

interface circuitry 70, 80 in operative communication with the microcomputer 60 for receiving the host device type signal (via based on the different pin signal received) and the data received by the microcomputer 60, selecting at least one interface from a plurality of interfaces in accordance with the host device type signal (see col. 8, lines 10+), and transmitting the received data including the acquired data (decoded bar code data) to at least one host device. The scanner functional block diagram shows (see figure 2) the plurality of drivers 70, 80 for driving output signal to voltage levels acceptable by the at least one host device, and further teaches a multiplexer (shown as an I/O multiplexor circuitry in figure 2) as a plurality of switches for coupling host specific outputs from the microcomputer to an output connector of the interface controller by selecting particular interface deriver circuit to be used when sending data signal to the output connector 90 (see col. 5, lines 1+; col. 7, lines 39+; col. 9, lines 11+; and figure 2).

Claim Rejections - 35 USC § 103

7.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8.   **Claims 10-12 and 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Behrens in view of Kelly.** The teachings of Behrens and Kelly have been discussed above.

Although Behrens teaches the plurality of driving means (for example, a line driver 30 for I/O device with RS-232 interface and a serial TTL input/output to deliver serial information to the attached computer at TTL logic levels) for conveying the decoded signal acceptable by the associated I/O Device; Behrens does not teach the plurality of drivers for driving output signal to voltage levels acceptable by the at lest one host device, and further fails to teach the interface circuitry comprising a plurality of switches for coupling host specific outputs from the microcomputer to an output connector of the interface controller via a multiplexer.

Kelly discloses a universal interface driver application specific integrated circuit (UIDA) for a data acquisition device (a data reading device), which supports multiple host interface configurations through the use of shared communications lines. The scanner functional block diagram show (see figure 2) the plurality of drivers 70, 80 for driving output signal to voltage levels acceptable by the at lest one host device, and further teaches I/O multiplexor circuitry as a plurality of switches for coupling host specific outputs from the microcomputer to an output connector of the interface controller by selecting particular interface deriver circuit to be used when sending data signal to the output connector 90 (see col. 5, lines 1+; col. 7, lines 39+; col. 9, lines 11+; and figure 2).

It would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to incorporate the teachings of Kelly in the teachings of Behrens in order to reduce the size of the circuitry assemblies within the data reader, increase the number of host device interfaces that are supported by the data acquisition device, and reduce the cost of the interface driver circuitry for multiple interface functionality (see col. 3, lines 23+).

Re claims 22-23: Behrens fails to teach inputting the type of at least one host device via the data acquisition (i.e., optically scanning the type of host device).

Kelly discloses the system inputting the type of at least one host device by scanning an interface configuration bar code from the data reader (see the abstract, claims 3 and 15).

It would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to incorporate the other known identifying method, as taught by Kelly, in the system of Behrens, in order to initiate the interface driver to identify and select the interface for. associated I/O device. Accordingly, such modification would have been an obvious extension taught Behrens.

Conclusion

9.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Redderson et al. [US 5,905,249] and Slutsky et al. [US 2003/0121981] discloses a data acquisition device supporting a plurality of different host computers.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to D. I. Lee whose telephone number is (571) 272-2399. The examiner can normally be reached on Monday through Thursday from 5:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee can be reached on (571) 272-2398. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

D. I. Lee
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